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It is the responsibility of the Professional Engineer to ensure that the design is adequate and meets the requirements of the project.

Waterline Example

GENERAL NOTES

1. In accordance with A.A.C. R18-5-504, all construction materials will be lead free, excluding leaded joints for cast iron pipes.
2. All water treatment chemicals and water components in contact with potable water will conform to National Sanitation Foundation 60 and 61 respectively. All plastic pipes and fittings will have the National Sanitation Foundation seal in accordance with Engineering Bulletin No. 10.
3. The system is designed using good engineering practice in accordance to Engineering Bulletin No. 10, as stated in A.A.C R18-5-502.
4. The minimum pipe cover is 3 ft given by the Engineering Bulletin No. 10.
5. All pipes, valves and other appurtenances will conform to the current AWWA standards in accordance with Engineering Bulletin No. 10.
6. All connections have national standard threads in accordance with MAG 360-1.
7. All new waterlines shall be pressure tested in accordance with current AWWA C605 for PVC and AWWA C600 for DIP.
8. All new water system components or equipment will be disinfected and flushed in accordance to Engineering Bulletin No. 8 Disinfection of Water Systems or AWWA C651-14.
9. After disinfection, all water system components or equipment will be bacteriologically tested by the Bacti test through an Arizona Department of Health Services certified laboratory.
10. All paint systems and cathodic protection equipment used to protect against corrosion conform to current AWWA D102 standards.

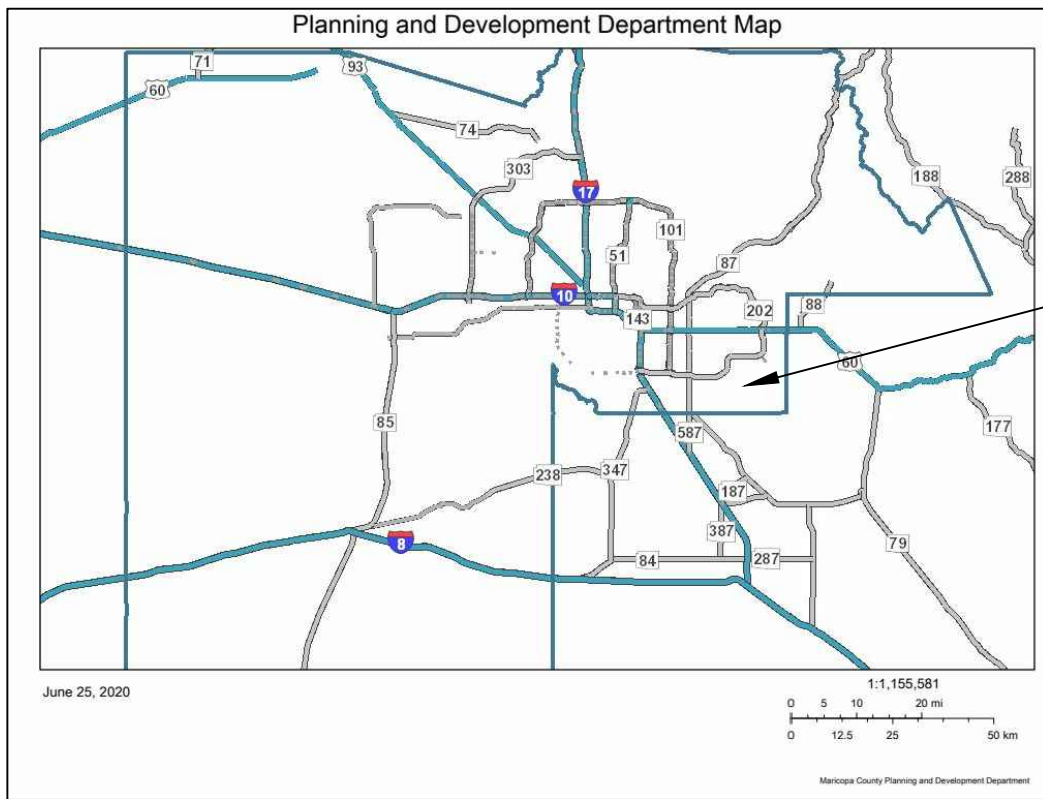
BASIS OF BEARING

The site is located within Gilbert, AZ at the respective coordinates: Lat 33.24772615 N, Long 111.84106692 W. The township is 1S 6E, Section 14 SWSW. The site is located in the X-shaded flood zone and not within the 100 year flood zone.

MATERIALS AND QUANTITY

| Materials | Quantity |
|--------------------|----------|
| 6" PVC C900 Piping | 980' |
| 6" Shut-off Valve | 5 |
| 6" Blow-off Valve | 1 |
| Air Release Valve | 1 |
| 6" T Bend Joint | 3 |
| Water Meter | 28 |
| Fire Hydrant | 2 |

VICINITY MAP



Site Location

SITE LOCATION



Property Lines

Site Location

| Revisions | | |
|-----------|-------------|------|
| No. | Description | Date |
| | | |
| | | |

Designed by:
Drafted by:
Checked by:
Date: June 2020

| Project No | Sheet |
|------------|-------|
| 0407225 | 1 |

Waterline Example

GENERAL NOTES

1.

a.

In accordance with A.A.C. R18-5-502(C), the water pipe will have a minimum horizontal separation of 6 ft and a minimum vertical separation of 2 ft above a sewer. If horizontal or vertical separation is not possible, pipes will be constructed with a pressure tested mechanical joint cast iron pipe or an approved equal. In addition to the pipe construction, a water main will have a vertical separation of 18 inches if crossing below a sewer.
1.

b.

In accordance with A.A.C. R18-5-502(C), the water pipe and sewer manholes will not come in contact and will have a minimum horizontal separation of 6 ft from the center of the manhole.
1.

c.

In accordance with A.A.C. R18-5-502(C), the water pipe will have a minimum horizontal separation of 6 ft and minimum vertical separation of 2 ft from force mains or pressure sewers. If a sewer force crosses above a water main within 6 ft vertically, the sewer main pipes will be encased in 6 inches of concrete or constructed with a pressure tested mechanical joint cast iron pipe for 10 ft before and after the crossing.

1.

d.

In accordance with A.A.C. R18-5-502(C), sewer mains will be at least 50 ft away from a well. Sewer mains can be at least 20 ft away from the well if pressure tested without excessive leakage to (a) 50 psi to be used for gravity sewers; or (b) 150 psi to be used for force mains. Additionally, a well will be constructed at least 100 ft from (a) a septic tank or subsurface disposal; (b) discharge or activity regulated under the Individual Aquifer Protection Permit; (c) a underground storage; (d) hazardous waste facilities regulated under the Arizona Hazardous Waste Management Act.
2.

The contractor will be responsible for the excavation required or ordered by the engineer as stated in MAG 601.2.1.
3.

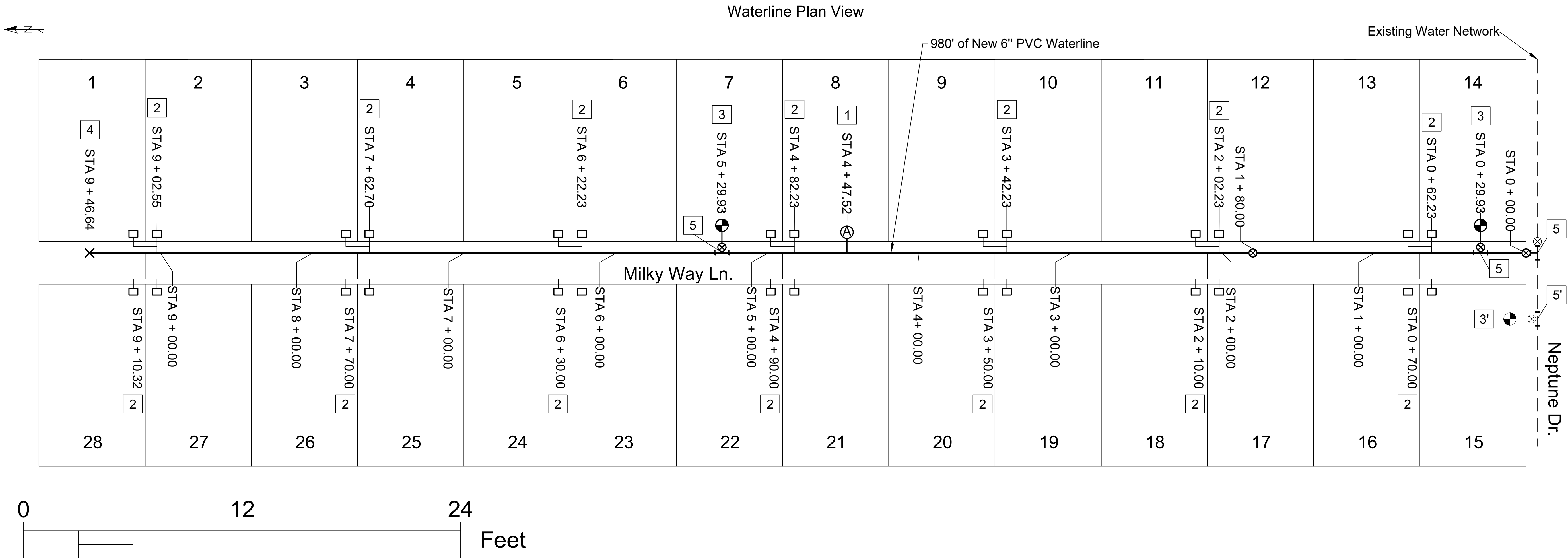
All thrust anchorage is designed for a safety factor 1.5 or larger with maximum pressure conditions given in Engineering Bulletin No. 10.
4.

The waterline is designed to maintain a slope without a local high point.
5.

All water mains are designed for the minimum 150 psi with allowances for a water hammer in accordance with the Engineering Bulletin No. 10.

LEGEND

| | |
|--|---|
| | New 6" PVC Pipe |
| | Existing 6" PVC Pipe |
| | Shut-off Valve |
| | Existing Shut-off Valve |
| | Air Release Valve, reference Detail 3-2 |
| | Water Meter |
| | New Fire Hydrant, reference Detail 3-5 |
| | Existing Fire Hydrant |
| | Flushing Valve, reference Detail 3-4 |
| | 6" T Connection |
| | Existing 6" T Connection |



Waterline Example

Revisions

| No. | Description | Date |
|-----|-------------|------|
| | | |
| | | |
| | | |

Designed by:
Drafted by:
Checked by:
Date: June 2020

Project No

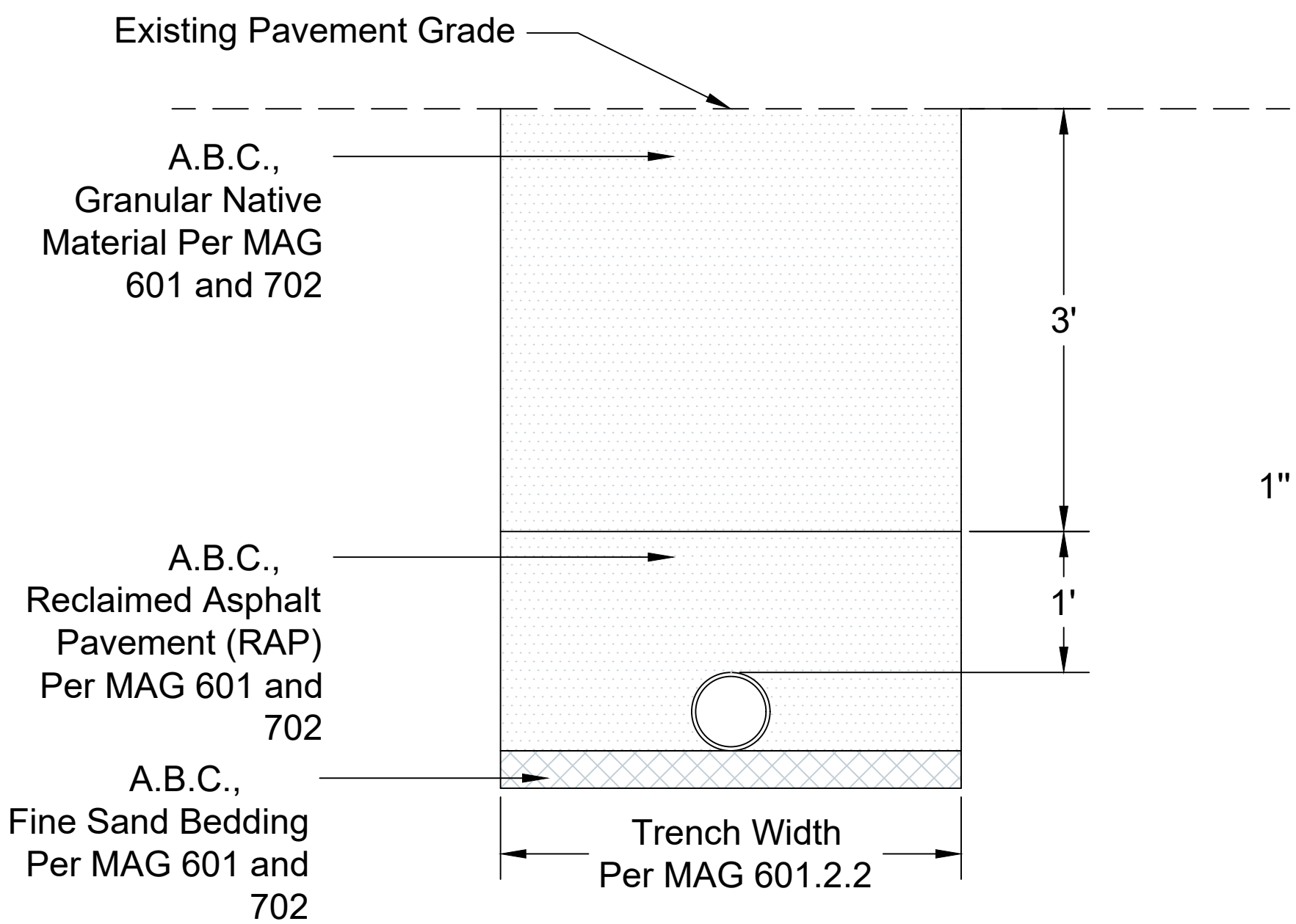
0407225

Sheet

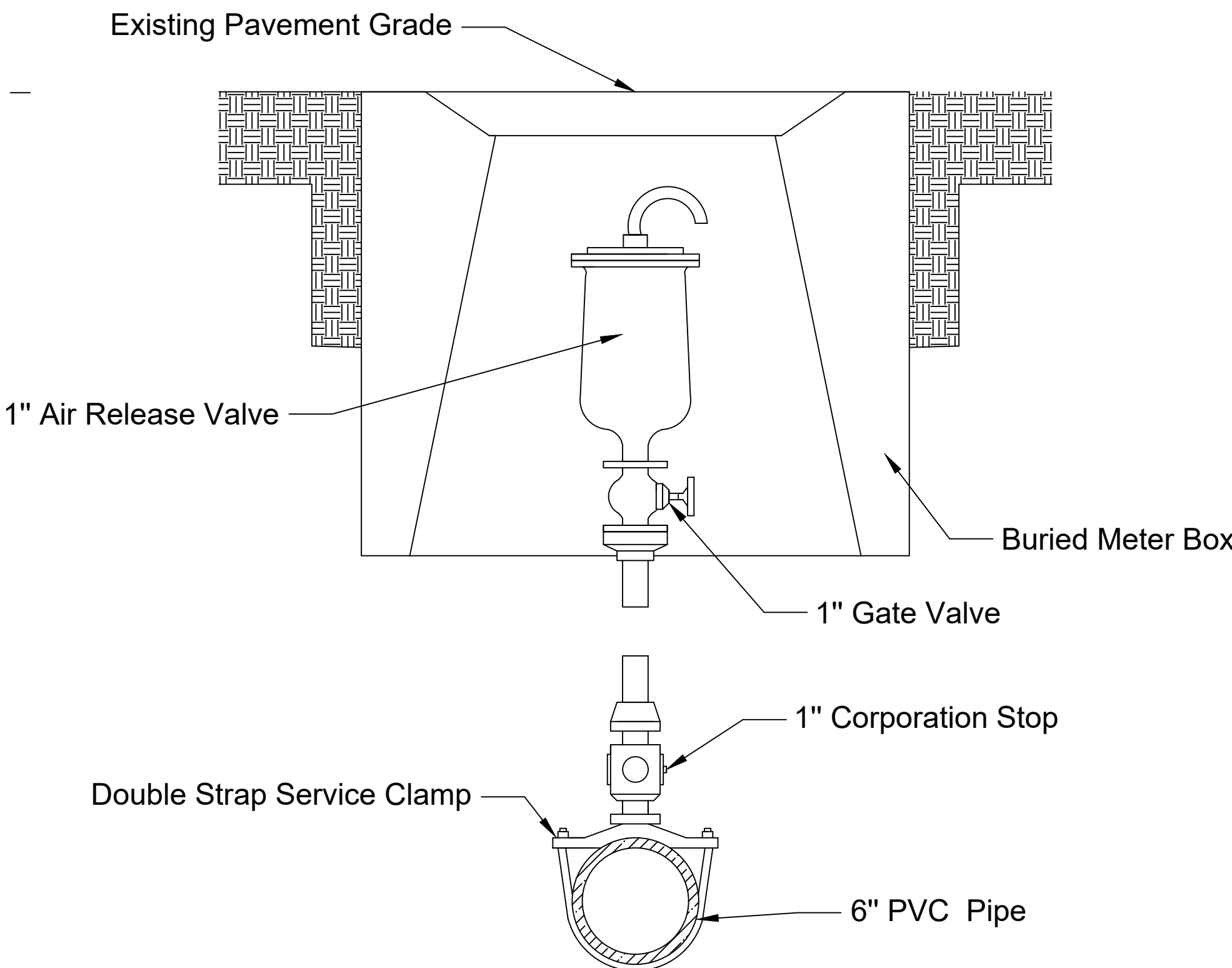
2

Waterline Details

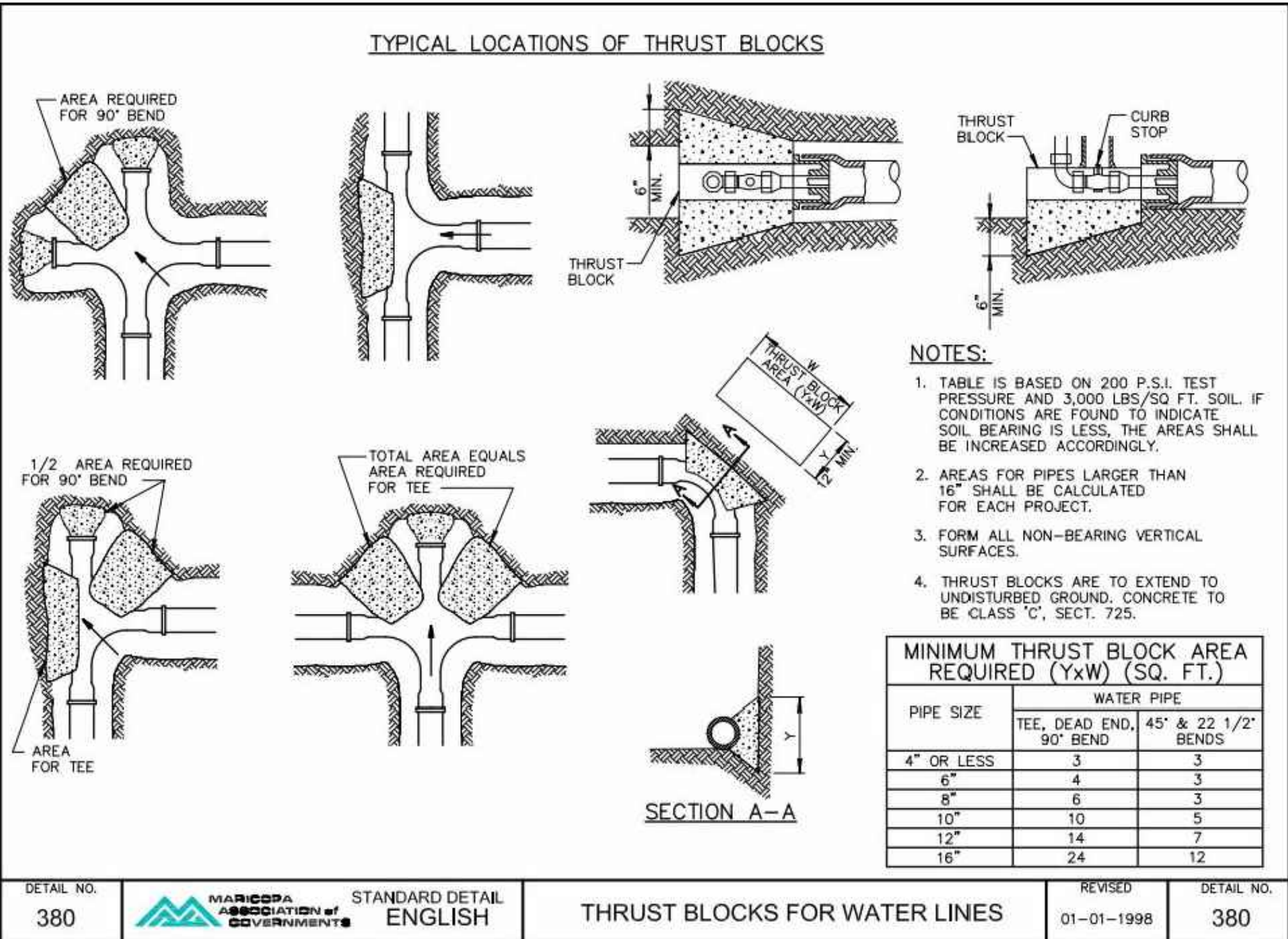
TRENCH DETAIL 3-1
N.T.S.



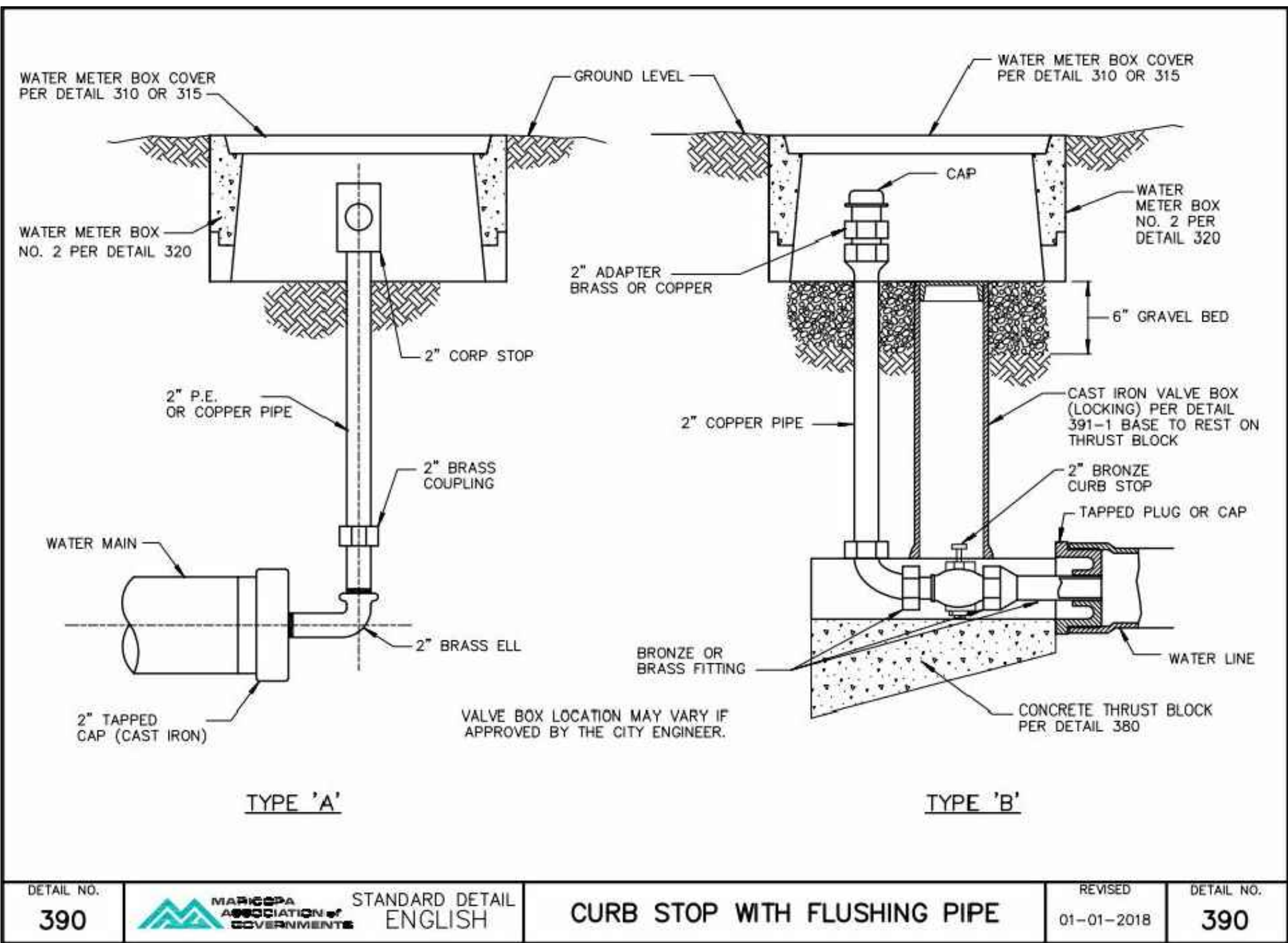
AIR RELEASE VALVE DETAIL 3-2
N.T.S.



THRUST BLOCKERS DETAIL 3-3
MAG 380
N.T.S.



BLOW-OFF PIPE DETAIL 3-4
MAG 390
N.T.S.



FIRE HYDRANT DETAIL 3-5
MAG 360-1
N.T.S.

